

### REMARKS

Applicant thanks the Examiner for the thorough consideration given the present application. Claims 2, 4-13, 16 and 18-21 are currently being prosecuted. The Examiner is respectfully requested to reconsider his rejections in view of the Amendments and remarks as set forth below.

#### *Allowable Subject Matter*

It is gratefully acknowledged that the Examiner considers the subject matter of claims 2, 4-13, 16-21 as being allowable if the 35 USC 101 and 35 USC 112 rejections are overcome. Although not conceding the appropriateness of the Examiner's rejections, the claims have been amended to overcome these rejections. Accordingly, all of the claims are now in condition for allowance.

#### *Rejection under 35 USC 112*

Claims 13, 16 and 18 stand rejected under 35 USC 112, second paragraph as being indefinite. In particular, the Examiner states that the claims do not provide any detail on the relationship and various components of the apparatus. Applicants submit that this rejection is now overcome by the re-writing of claim 13 to describe the connections between the various parts including the receiving of light from the sample by the spectral-optical system and the receiving of thermal radiation by the pyrometer. In view of this, Applicant submit that these claims are now allowable.

#### *Rejection under 35 USC 101*

Claims 2, 4-12 and 19-21 stand rejected under 35 USC 101 as being directed to non-statutory subject matter. This rejection is respectfully traversed.

The Examiner specifically states that the independent claims do not constitute a usable, concrete and tangible result. The Examiner refers to the OG Notice of November 20, 2005. Applicant notes that this is now incorporated as MPEP 2106.

First, Applicant notes that the OG Notice is specifically directed to computer algorithm claims. Applicant submits that the present invention is not in any way direct to an algorithm type claim, but instead is specifically directed to a method of measuring parameters of a layer being formed on a sample utilizing an optical device to measure the temperature and other parameters of the sample. In order to make this more clear, Applicant has amended claims 19-21 to add the step of irradiating the light as part of the body of the claim rather than preamble. Applicant has also added the steps of the receiving of emitted thermal radiation by the pyrometer and the receiving of reflected light by the spectral-optical system. Applicant has also added the connection of the pyrometer and spectral-optical system to the step of determining the parameters. Applicant submits that the addition of these limitations in claims 19-21 clearly define this as not being an algorithm and further provides a concrete framework in which the claim is being stated. Further, in claim 19 the last paragraph has been amended to more clearly point out the compensation of the determination of the parameters using a lens, a beam splitter and an aperture. Applicant submits that the step of the determination of the parameters and the compensation are not algorithm steps, but rather standard signal processing based on specific inputs from sensors. Applicants submit that claim 19 is now appropriately defined and does not relate to a mere algorithm.

Likewise, claims 20 and 21 in the last paragraph describe the separation of the optical paths. This is also not an algorithm type step, but rather relates to a strictly physical device.

The Examiner is also referred to the introductory portion of the present application which indicates that the measurement of layer thickness is an important tool to be used during quality control in semiconductor production. The measurement process can be conducted as real time measurements using spectroscopic-optical devices. Accordingly, Applicant submits that it is clear that the present invention does not relate to an algorithm, but rather to a concrete tangible method.

Applicant has also amended the dependent claims in order for the language of the dependent claims to mirror the changes in the independent claims. Also, Applicant has attempted to restate "wherein" clauses in more direct structural clauses. Applicants have also changed the dependency of claims 5 and 6 so that they more properly depend on claim 4.

In view of the above, Applicant submits that the rejection under 35 USC 101 is overcome. Applicant submit that the claims now all are directed to statutory subject matter. In particular, the method claims now describe concrete and tangible steps and that it is clear that these claims are not related to algorithms. In view of this, Applicant submit that the rejection is overcome and all the claims are allowable.

*Conclusion*

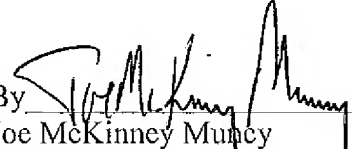
In view of the above remarks, it is believed that the claims now fully meet the requirements of the 35 USC 112 and 35 USC 101. In view of this, reconsideration of the rejections and allowance of the all claims are respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert F. Gnuse Reg. No. 27,295 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: March 26, 2007

Respectfully submitted,

By   
Joe McKinney Muncy  
Registration No.: 32,334  
BIRCH, STEWART, KOLASCH & BIRCH, LLP  
8110 Gatehouse Road  
Suite 100 East  
P.O. Box 747  
Falls Church, Virginia 22040-0747  
(703) 205-8000  
Attorney for Applicant